Robert Simpson

03/07/2002 06:07 PM

To: Seth Ausubel/R2/USEPA/US@EPA
cc: Linda Timander/R2/USEPA/US@EPA
Subject: Redefined watershed for Berry's Creek.

Seth,

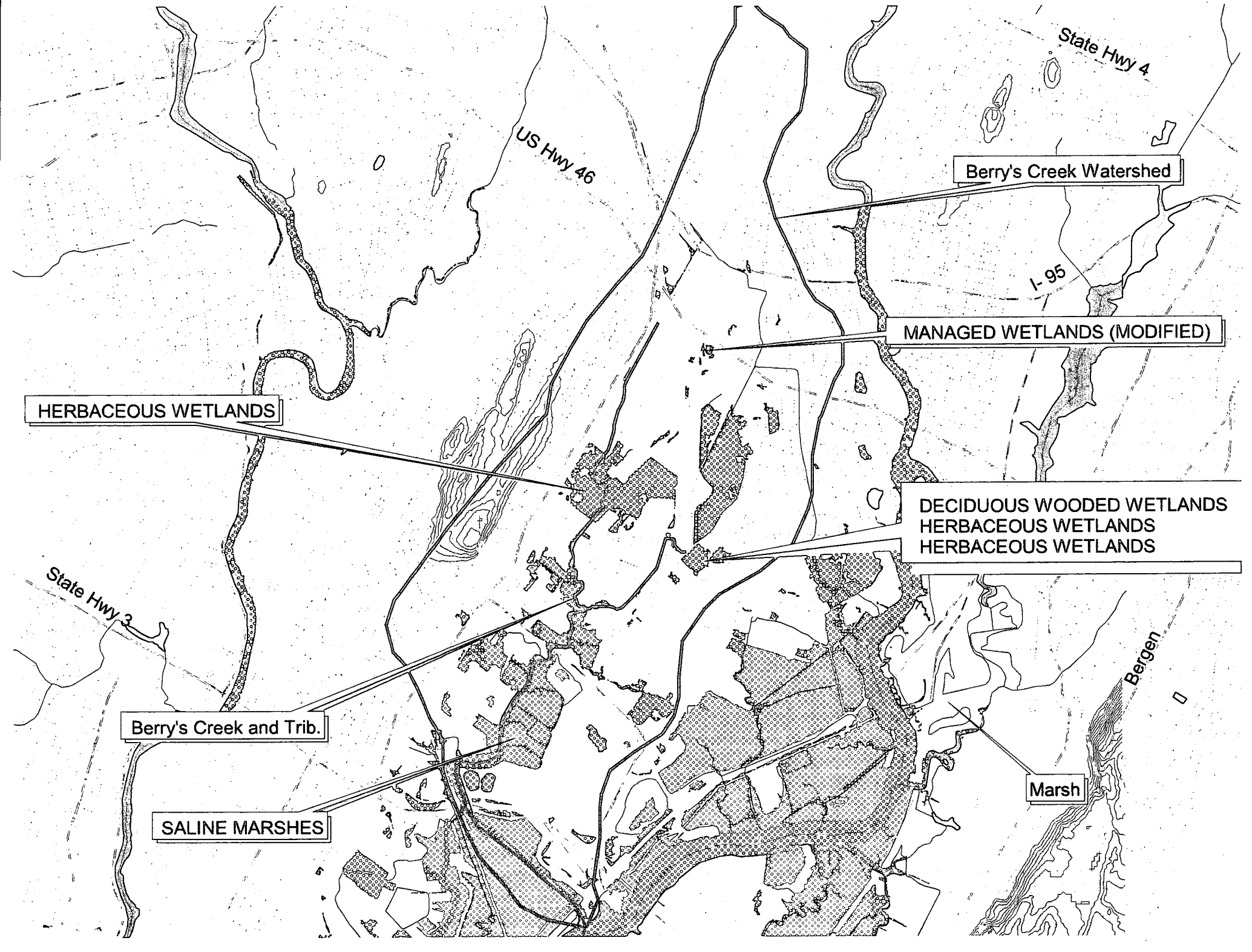
I found a USGS gauging station report which listed the Berry's Creek watershed at 9.69 sq. miles. This report however provided no picture or digitized product. My first crack at delineating the watershed came in at 5.59 sq. miles. I talked with Maryann Thiesing and Dave Pohle. Maryann has an in depth background on the area and Dave is a wetland specialist. They gave me good information which helped me produce a better watershed delineation and new map which is attached. Let's talk.

berry_creek1.pdf

Bob Simpson

6211 Acres

Bob Simpson
x3335


State Hwy 4
US Hwy 46
Berry's Creek Watershed
I- 95
MANAGED WETLANDS (MODIFIED)
HERBACEOUS WETLANDS
DECIDUOUS WOODED WETLANDS
HERBACEOUS WETLANDS
HERBACEOUS WETLANDS
State Hwy 3
Bergen
Berry's Creek and Trib.
Marsh
SALINE MARSHES

David Pohle

03/11/2002 09:42 AM

To: Robert Simpson/R2/USEPA/US@EPA
cc: Seth Ausubel/R2/USEPA/US@EPA, Mary Thiesing/R2/USEPA/US@EPA
Subject: Re: gis/wetlands meeting notes

OK. I'll look it over some time today, and I am hereby asking Mary Anne to please also review it.

"Series" or "soil series" is indeed the correct term.

After we last spoke, I talked to Mary Anne. She told me that I had described it correctly when I said that the wetland areas mapped as udorthents are essentially old fill material over wetlands that has subsided and secondarily become wetlands again. The soil, when you dig a hole and observe it, may not show "hydric" characteristics due to the nature of the fill material though it would nonetheless be considered hydric, by definition, in those areas where the soil (regardless of the series) is, in point of fact, almost continuously inundated or saturated. Soil usually must have decomposition of organic material from the leaf litter in it to produce the physical/chemical attributes that are observed as "hydric indicators". But dredged spoil or garbage that was used historically as fill may not have large amounts of decomposing organic material - except maybe old hot dogs and buns - and thus may not appear to be hydric soil when you examine it in the field. Hydric soils are "wet" soils, and soils that are inundated or saturated for prolonged periods under normal circumstances in most years are hydric soils by definition, even if they don't look like them and are not on the list. In other words, a acre of ground where the soil is mapped as udorthent, but is indundated or saturated for prolonged periods under normal circumstances in most years, is an ace of hydric soil even though the soil series mapped there is a non-hydric soil series. Yes, forget about Anasco here.

Dave

Robert Simpson

Robert Simpson

03/11/02 08:58 AM

To: David Pohle/R2/USEPA/US@EPA
cc: Seth Ausubel/R2/USEPA/US@EPA
Subject: Re: gis/wetlands meeting notes

Dave,

Thanks for looking over the project and sending the resources. Bill Hansen retrieved the NJDEP SOILS (SSURGO database) form the area. It had considerably better resolution and also had the "series" (?) names you were looking for. I was surprised that this information layer didn't consider Udorthents a hydric soil though it probably didn't surprise you.

I have attached a .dbf which describes the soil series name, sum area and whether it is considered hydric or not for the Berry's Creek watershed. I also attached a .pdf of the resulting map. You'll see that the sum area described as Udorthent is a major component (7,197,562 sq. meters).

In the map, Hydric soils (PREAKNESS and SULFIHEMISTS but not including WATER) have a parallel colored line legend which overlays the NJDEP Fresh water wetlands polygons. These hydric soils have a total area of approx. 529 acres out of a 9.91sq. mile watershed (6,345 acres). Udorthents soils covers 1,778 acres in the watershed. You suggested that some or all of the Udorthents soil may now be inundated at times do to settling of the land fill component. I take it then that you wouldn't rely on the procedure we used in Anasco of intersecting non-upland wetland polygons with Hydric soils to get our suspected wetland polygons. Looking at the attached map then, what would you say are the areas of possible wetlands in the watershed ?

Thanks a lot,